

REMARKS

In the above-identified Office Action the Examiner has rejected claims 1-3 as unpatentable over Schrems. The Examiner stated that the Schrems reference teaches a method of predicting oxygen content in CZ silicon wafers. The Examiner has also noted that the sole difference between the instant claims and the prior art is specific heat treatment temperatures.

In the study of Schrems, the calculation results of the oxygen precipitation agree with the actual measurement values. Applicant notes that there is a difference in the calculation process between the present invention and the method of Schrems. It is apparent that the method of Schrems does not employ a thermal donor concentration in the calculation (see Schrems at page 392, lines 2-4). Therefore, the method of Schrems does not teach an actual element of the subject invention as recited in the claims and thus cannot achieve the results brought by the present invention.

Schrems discloses a method for so called "model fitting." However, when using the method of Schrems, it is required to change the parameters for each heat treatment process, and thus it is required to perform experiments for determining the fitting parameters in each case. Since it is not easy to determine the fitting parameters by experiment, it would be difficult to use the method of Schrems in a commercial process of silicon single crystal production. Therefore, the method of Schrems does not have much practical value.

On the other hand, the present invention employs the parameter of the thermal donor concentration in its calculation for predicting precipitation behavior of oxygen. It is relatively easy to determine the concentration and quantity of the oxygen precipitation with the use of the present invention and to use the invention commercially, in contrast to the method of Schrems. As a result, since Schrems is missing a key element in his method, as compared to the subject invention of the claims, the invention as claimed should be patentable.

Application No. 10/586,445
Amdt. dated 4 June 2010
Reply to Office Action of 10 March 2010

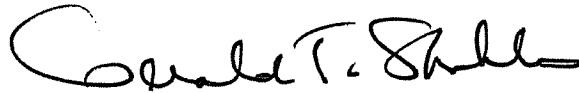
It should be noted that the heat range from 400° C to 550° C recited in the claims is a characteristic range with respect to a thermal donor (see [0007]). Thus, since the method of Schrems, in which the necessity of a thermal donor does not exist, has nothing to do with this range, a skilled person would not have reached this range on the basis of Schrems. Thus, it cannot be said that the present invention would have been obvious in light of Schrems.

Applicant hereby requests reconsideration and reexamination thereof.

With the above amendments and remarks, this application is considered ready for allowance and applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he/she is respectfully requested to call the undersigned at the below listed number.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerald T. Shekleton". The signature is fluid and cursive, with the first name "Gerald" being more prominent and the last name "Shekleton" following in a similar style.

Dated: 4 June 2010

Gerald T Shekleton
Reg. No. 27,466
Husch Blackwell Sanders Welsh & Katz
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
Phone: (312) 655-1511
Fax: (312) 655-1501